AMENDMENTS TO THE CLAIMS

Claims 1-3 (canceled)

4. (withdrawn) The method of Claims 1, wherein the therapeutic agent is a protein.

5. (withdrawn) The method of Claim 4, wherein the protein is selected from the group consisting of FGF-1, FGF-2, FGF-5, VEGF, $VEGF_{165}$, HIF-1, PDGF-1, PDGF-2, DELI, angiopoietin, HGF, MCP-1, eNOS, and iNOS.

6. (withdrawn) The method of Claim 1, wherein the therapeutic agent comprises a nucleic acid.

7. (withdrawn) The method of Claim 6, wherein the nucleic acid encodes a protein selected from the group consisting of FGF-1, FGF-2, FGF-5, VEGF, $VEGF_{165}$, HIF-1, PDGF-l, PDGF-2, DELI, angiopoietin, HGF, MCP-1, eNOS, and NOS.

8. (withdrawn) The method of Claim 6, wherein the nucleic acid encodes an antisense molecule.

9. (withdrawn) The method of Claim 6, wherein the nucleic acid is delivered as RNA, DNA, plasmid or a viral vector.

10. (withdrawn) The method of Claim 9, wherein the viral vector is an adenovirus vector or an adeno-associated virus vector.

11. (withdrawn) The method of Claim 10, wherein said RNA; DNA, plasmid or a viral vector is in a liposome.

12. (Currently amended) A method for delivering a therapeutic agent to an ischemic or diseased heart which comprises intramyocardially delivering a therapeutically-effective amount of the therapeutic agent to normal tissue in said heart ~~The method of Claim 1~~, wherein the therapeutic agent comprises cells.

13. (Previously presented) The method of Claim 12, wherein said cells are endothelial progenitor cells, mononuclear cells, bone marrow stromal cells, stem cells, cardiac myoblasts, are the cells of whole filtered bone marrow, or any combination of cells.

14. (Previously presented) The method of Claim 12 or 13, wherein said cells have been genetically engineered ex vivo.

15. (Currently amended) A method to stimulate collateral blood vessel formation in the myocardium in an ischemic or diseased heart, which comprises intramyocardially delivering an angiogenic factor, or cells capable of producing an angiogenic factor, to normal tissue in an ischemic or diseased heart of a subject in an amount sufficient to stimulate collateral blood vessel formation in said ischemic or diseased heart.

16. (withdrawn) The method of Claim 15, wherein said angiogenic factor is an adenovirus vector or an adeno-associated virus vector comprising a coding sequence encoding said angiogenic factor, said sequence operatively linked to a promoter effective to induce expression in a cardiac muscle cell, and wherein sufficient expression of said angiogenic factor occurs to stimulate collateral blood vessel formation.

17. (Currently amended) A method to induce angiogenesis in the myocardium which comprises intramyocardially delivering an angiogenic factor, or cells capable of producing an angiogenic factor, to normal tissue in an ischemic heart of a subject in an amount sufficient to induce angiogenesis in said ischemic or diseased heart.

18. (withdrawn) The method of Claim 17, wherein said angiogenic factor is an adenovirus vector or an adeno-associated virus vector comprising a coding sequence encoding said angiogenic factor, said sequence operatively linked to a promoter effective to induce expression in a cardiac muscle cell, and wherein sufficient expression of said angiogenic factor occurs to induce angiogenesis.

19. (Currently amended) A method to improve contractile function of in an ischemic heart which comprises intramyocardially delivering an angiogenic factor, or cells capable

of producing an angiogenic factor, to normal tissue in an ischemic heart of a subject in an amount sufficient to improve contractile function of said ischemic or diseased heart.

20. (withdrawn) The method of Claim 19, wherein said angiogenic factor is an adenovirus vector or an adeno-associated virus vector comprising a coding sequence encoding said angiogenic factor, said sequence operatively linked to a promoter effective to induce expression in a cardiac muscle cell, and wherein sufficient expression of said angiogenic factor occurs to improve contractile function of said heart.

21. (Previously presented) A method to promote tissue regeneration in an ischemic or diseased heart which comprises intramyocardially delivering a therapeutic agent to normal tissue in an ischemic heart or diseased heart of a subject in an amount sufficient to stimulate tissue regeneration in said ischemic or diseased heart.

22. (withdrawn) The method of Claim 21, wherein said therapeutic agent is an adenovirus vector or an adeno-associated virus vector comprising a coding sequence encoding a ligand for a progenitor or stem cell, said sequence operatively linked to a promoter effective to induce expression in a cardiac muscle cell, and wherein sufficient expression of said ligand occurs to stimulate tissue regeneration in said heart.

23. (Currently amended) The method of any one of Claims 15-~~20~~, 17 or 19 wherein the ~~angiogenic factor or~~ cells are delivered to normal tissue adjacent to ischemic tissue.

24. (Currently amended) The method of any one of Claims 15-~~20~~, 17 or 19 wherein the ~~angiogenic factor or~~ cells are injected at multiple sites in the normal tissue.

25. (Previously presented) The method of any one of Claims 15-~~20~~, 17 or 19, wherein said angiogenic factor is selected from the group consisting of FGF-1, FGF-2, FGF-5, VEGF, $VEGF_{165}$, HIF-1, PDGF-1, PDGF-2, DELI, angiopoietin, HGF, MCP-1, eNOS, iNOS, or a combination thereof.

26. (withdrawn) The method of any one of Claims 15-~~20~~, 17 or 19 wherein said angiogenic factor is a growth factor.

27. (withdrawn) The method of Claim 26, wherein said growth factor is FGF-5, acidic FGF, basic FGF, PDGFl, PDGF2, VEGF an endothelial growth factor or a vascular smooth muscle growth factor.

28. (withdrawn) The method of any one of Claims 15, 17, or 19, wherein said angiogenic factor is a protein or encoded by a nucleic acid with the coding sequence for said protein operatively linked to a promoter effective to induce expression of said protein in a cardiac muscle cell.

29. (withdrawn) The method of Claim 28, wherein said promoter is tissue-specific.

30. (withdrawn) The method of Claim 29, wherein the tissue-specific promoter is selected from the group consisting of the promoters of cTNC, MHCα, MHCβ, MLC_{2v}, NppA, and CARP.

31. (withdrawn) The method of any one of Claims 16, 18, 20, or 22, wherein said promoter is tissue-specific.

32. (withdrawn) The method of Claim 31, wherein the tissue-specific promoter is selected from the group consisting of the promoters of MHCα, MHCβ, MLC_{2v}, NppA, and CARP.

33. (withdrawn) The method of any one of Claims 16, 18, 20 or 22, wherein said adenovirus is replication-defective.

34. (withdrawn) The method of any one of Claims 16, 18, 20 or 22, wherein said adenovirus is adenovirus serotype 5.

35. (withdrawn) The method of any one of Claims 16, 18, 20 or 22, wherein said adenovirus lacks the early gene region El, the early gene region E3, or both.

36. (original) The method of claim 21, wherein the therapeutic agent is a protein, nucleic acid, or drug which promotes tissue regeneration.

37. (original) The method of claim 21, wherein the therapeutic agent is the CD34 ligand or the c-kit ligand.

38. (Previously presented) A method for treating myocardial ischemia which comprises delivering a therapeutic agent to normal myocardial tissue in an ischemic or diseased heart in an amount sufficient to ameliorate the symptoms of ischemia.

39. (original) The method of Claim 38, wherein the therapeutic agent is delivered to normal tissue adjacent to ischemic tissue.

40. (original) The method of Claim 38 or 39, wherein the therapeutic agent is injected at multiple sites in the normal tissue.

41. (withdrawn) The method of Claim 38, wherein the therapeutic agent is a protein.

42. (withdrawn) The method of Claim 41, wherein the protein is selected from the group consisting of FGF-1, FGF-2, FGF-5, VEGF, $VEGF_{165}$, HIF-1, PDGF-1, PDGF-2, DELI, angiopoietin, HGF, MCP-1, eNOS, and iNOS.

43. (withdrawn) The method of Claim 38, wherein the therapeutic agent comprises a nucleic acid.

44. (withdrawn) The method of Claim 43, wherein the nucleic acid encodes a protein selected from - the group consisting of FGF-1, FGF-2, FGF-5, VEGF, $VEGF_{165}$, HIF-1, PDGF-1, PDGF-2, DELI, angiopoietin, HGF, MCP-1, eNOS, and iNOS.

45. (withdrawn) The method of Claim 43, wherein the nucleic acid encodes an antisense molecule.

46. (withdrawn) The method of Claim 43, wherein the nucleic acid is delivered as RNA, DNA, plasmid or a viral vector.

47. (withdrawn) The method of Claim 46, wherein the viral vector is an adenovirus vector or an adeno-associated virus vector.

48. (withdrawn) The method of Claim 46, wherein said RNA, DNA, plasmid or a viral vector is in a liposome.

49. (Original) The method of Claim 38, wherein the therapeutic agent comprises cells.

50. (Previously presented) The method of Claim 49, wherein said cells are endothelial progenitor cells, mononuclear cells, bone marrow stromal cells, stem cells, cardiac myoblasts, are the cells of whole filtered bone marrow, or any combination of cells.

51. (Previously presented) The method of Claim 49 or 50, wherein said cells have been genetically engineered ex vivo.

52. (Withdrawn) The method of Claim 38, wherein an amelioration of symptoms of ischemia is indicated by increased transmural blood flow in the myocardium at rest or under stress conditions, by collateral blood vessel formation, by improved contractile function or by regeneration of myocardial tissue.

53. (Withdrawn) The method of Claim 38, wherein an amelioration of one or more symptoms of ischemia is indicated by reduced chest pain or reduced shortness of breath.

54. (Currently amended) The method of any one of Claims 12, 15, 21, [[~~22~~]], 38, 39, or [[~~52~~]] 49, wherein said delivery is by a catheter, a stiletto catheter, a needle, a needle-free injector, or a channeling device.